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Henten, Anders

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Innovations from the ICT-based service encounter

by

Anders Henten

CMI, Plan, AAU

Lautrupvang 1A

2750 Ballerup

E-mail henten@cmi.aau.dk

Open Innovation and New Business Creation

Hotel LEGOLAND

Innovations from the ICT-based service encounter

The paper aims at developing a framework for analyzing the dynamics of innovations emanating from ICT-based service encounters. To do this, the paper discusses and merges different approaches in the existing literature and examines different modes of ICT-based customer/employee interaction to construct a framework that will help understand how innovations are developed on the basis of a service encounter, which is ICT-based.

There is a rich literature on the service encounter, i.e. the incident where the service provider meets the customer, starting with Czepiel et al. (1985) including Shostack (1985). In far the major part of this literature, the service encounter in question is face-to-face. However, there are also contributions – though considerably less - analyzing technology-based service encounters (e.g. Bitner et al., 2000; Massad et al., 2006). Furthermore, the literature in the field of innovation taking its point of departure in the service encounter (e.g. Alam, 2006) is scanty and very little exists concerning innovations coming out of the ICT-based service encounter.

This could be seen as relatively strange, as ICT-based services are increasingly common. However, the academic literature lacks grossly behind in this field and there is a strong need for developing an understanding of the innovation processes related to the ICT-based service encounter.

The paper first presents approaches to the different relevant topics mentioned one-by-one: The face-to-face service encounter, the ICT-based service encounter, innovation, and innovations developed on the basis of service encounters. It, thereafter, analyses three modes of ICT-based service encounters. Subsequently, and founded on the existing approaches and theories presented and the different modes of ICT-based service encounters examined, a framework for analyzing innovations from the ICT-based service encounter is suggested.

The overall approach taken in the paper is that research on services, and more specifically the service encounter, can be used to analyze ICT-based services and innovations emanating from ICT-based service encounters. In most literature on ICT and services, the approaches used concern the many different ways in which ICT influences services. This obviously constitutes a relevant analytical perspective. However, the reverse approach is also relevant: General knowledge on services can be used to better understand ICT-based services. A service-dominant logic (Lusch & Vargo, 2006) will be helpful in constructing a framework for understanding innovations having their starting point in ICT-based service encounters.

Modes of ICT-based customer input

Companies offering services have different ICT applications at their disposal for interacting with their customers. Such communications have taken place for decades primarily by means of the telephone. Customers have, for instance, made their complaints, which constitute an important kind of feedback from customers (Danaher and Mattsson, 1994), over the phone. With all the new technological possibilities at hand, the ICT-based feedback mechanisms can be refined, for instance, by using internet-based social networks to interact with customers as an add-on to the core face-to-face service. Starbucks is a well-known example of this with a vast community of customers interacting with one another and with Starbucks. This is not only a source of inspiration for the core coffee shop service but becomes part of the service concept as such.

In a growing number of instances, the service itself is ICT-based – often called e-services. The basic feedback mechanisms are similar to the abovementioned case. Different means of ICT-based communications can be used to interact with customers and receive customer input. However, as the core service itself is ICT-based, the potentials for integrating the feedback mechanisms into the service itself are enhanced. A well-known example will be e-banking services.

A third type is a service where the users themselves create an important part of the service. This applies to all the new kinds of ICT-based services with user generated content (UGC), for instance video-sharing platforms as YouTube or social networks as Facebook. User-based innovations do not primarily in these instances come about on the basis of input from the users to the service provider. The input provided by the users is the innovation. In this context it should be mentioned that such UGC-based products are not only ICT-based but have existed long before ICT platforms were created. This applies, for instance, to newspapers with ads from private persons and business companies. However, the use of ICT has vastly contributed to the increasing importance of such services.

Face-to-face service encounter with ICT-based customer/employee interaction

When including the telephone into the range of ICT-based mechanisms for contact between customers and companies, there are elements of ICT-based customer encounters in all business areas. The use of an ICT-based input mechanism will in the cases of face-to-face encounters with ICT-based customer/employee interaction be related to the marketing, contacting, ordering/contracting, payment, and feedback (for instance complaints) phases or business elements. The extent to which all these different phases or elements will be considered part of the service encounter concept is a matter of definition. However, even from a relatively narrow conception of the service encounter, these phases or elements could be considered part of the service encounter.

Nevertheless, when dealing with service encounters requiring face-to-face contact between the producers and the consumers, the abovementioned phases or elements are 'circumstantial' to the core service. However, ICT-based elements may also be part of the service package itself. This applies, for instance, if there is a consultancy part of the service, where follow-up issues can be resolved. In these cases, the individual customer can draw on the expert knowledge of the service company employees. It also applies to cases, where a kind of electronic community is established in connection with the service company. Not only does this provide a mechanism for feedback from customers to the company, but it also becomes part of the total service of the company.

Another and very simple example is a construction company servicing residential customers, for instance a plumbing company. The company will most likely be contacted by the customer via the phone; negotiations regarding the work to be done will, in general, be performed face-to-face; possible complaints will often have to rely on phone contact. Another simple but Internet-based example could be hotel services, where the guest orders a room via Internet and possibly after the stay is asked to provide an Internet-based quality assessment.

All types of ICT-based input mechanism are used - from the most simple (telephone) to the more complex (social media on the internet). The telephone (voice) provides a relatively rich form of interactive communication though written communication, for instance via the internet, may deliver a more exact communication for the records. The new internet-based social media also provide a richer environment than a simple web page, where a service quality questionnaire can be filled out. The degree of interactivity can be much higher on the social media application forming the basis not only for contact between the service provider and customers but also between the different customers.

A special issue deserves attention regarding the present and the following modes of ICT-based interaction. It is often seen that companies outsource the ICT-based aspects of their customer contact to specialized companies. This applies to telephone-based call centers but also to internet-based applications. When customers call to place an order, they may be re-directed to the company itself, but when dealing with a complaint the call centre will perhaps take care of it and later report to the company. This may certainly be an efficient and cost-saving mechanism but will in many cases be irritating to the customers because they cannot get in contact with the specialists from the company and it may also be a barrier for the company to learn from customer complaints and other input.

ICT-based service encounter with ICT-based customer/employee interaction

Although all-ICT telephone-based services do exist - primarily in public services - services which are entirely ICT-based will mostly be internet-conveyed services. An important exception is the telephone service itself. Though the

contact with telephone companies to an increasing extent takes place via internet, the contact has traditionally been through the phone and still often is.

In contrast to the group of services discussed in the former sub-section, it is not only the 'circumstantial' service elements, which are ICT-based. The core service itself is also ICT-based. This applies to the telephone service mentioned above; it applies to ISP services (Internet Service Providers); it also applies to the growing number of services, which are delivered via internet for instance internet-banking/e-banking. For special consultancy services regarding more complex financial transactions, banking customers may visit their bank and talk to their advisor. However, for most transactions, for instance bank transfer or payment services, the whole service is electronic.

What characterizes these kinds of services is that they consist of data, information and knowledge, which can be entered on digital media and, therefore, transported on communication networks. They are e-services. Another and vast group of services could be considered to be on the borderline, namely e-commerce, the marketing and selling of goods via the net. In these cases, the service is a retail or wholesale service, which is all digitized. The delivery of the physical goods can obviously not take place via internet but needs a physical transport and delivery mechanisms. The transport company may, therefore, have a face-to-face contact with the customer. However, this transport company will not likely be the e-commerce company itself, and what the e-commerce company provides is an all-digital commerce service.

In contrast to the previous sub-section, e-commerce companies of these kinds will mostly sell goods from a large range of different goods providers. However, to an increasing degree this phenomenon is also seen in the case of services, for instance hotel portals, which are intermediaries between hotels and hotels guests. In the previous sub-section, the example was a single hotel conducting its communication before and after the stay with the customer. In this sub-section, the example is a portal providing the communications with hotel guests before the stay.

A well-know example of an e-commerce company is Amazon, which started out selling books on internet but today sells a wide range of goods and services. Formerly, all books would be shipped to the customers in a physical form. Presently, an increasing number of the books sold are e-books. However, the primary service delivered by Amazon is the retail service of selling books. In contrast to the traditional book stores, the whole service is digital.

When all communications between companies and customers take place via internet in the form of text communication, the communication becomes less flexible and more structured. Chat elements may be part of it to 'soften up' the communication and different social media applications can be used. Voice elements can also be inserted. This was, for instance, the intention of e-Bay when they bought Skype (Thottam, 2005). But in most cases, companies which sell goods or services via internet will seek to limit voice communications between the company and its customers in order to limit the heavy costs of staff to serve customers on a voice basis. The result is a potentially less rich communication between companies and their customers.

To compensate for this, quality assessment schemes are used to receive reactions from customers. Customers will be asked to fill out short questionnaires regarding their assessment of the service quality. Also, different recommendation mechanisms can be included (e.g. Adomavicius and Tuzhilin, 2005). Such recommendation mechanisms can be based on the explicitly expressed input from the customers stating that they will be happy to receive information of different kinds. Recommendation mechanisms can also be based on the actual actions of the customers on the web sites using the log data from customers.

This is one of the areas where ICT-based customer encounters provide better input from customers. The customer input is more easily built into the overall service, as the core service itself is also a digital service. Not only is written communication more exact with respect to later reporting. The log data of customers provide an enormously rich base for improving the basic service but also for making precise recommendations to customers. The service will thus become more personalized to the individual customer (e.g. Ho, 2006).

In addition to text communications, video communications can also be used. The situation is that most customers will not allocate time for longwinded text communications with companies via web sites. But they may be prepared to watch a short video presenting an introduction to the goods or services sold and to react on this basis.

ICT-based service encounter where the customers/users are part in creating the service

The last category concerns the kinds of services, where the users themselves are part in creating the service. In the previous two sub-categories, users consume services provided by professional service providers. In the present category, the users are also the producers. The platforms for the user production are delivered by platform providers, but the content – which is why users go to the site – is made by the users partly or in total.

This kind of ICT-based service encounter where the users are part of creating the service is also enriched by explicitly expressed user preferences and by user log data mentioned in the previous sub-section. It, however, goes beyond this. The platforms on which User Generated Content (UGC) is provided will mostly be professionally developed and the platform will continuously be developed by the platform provider. However, the content as such will be produced by the users.

A well-known example is the video-sharing platform YouTube – even though part of the content is in fact professionally produced. Another well-known example is the social network Facebook. The Facebook platform constantly provides new applications and services for the users, but the primary reason that users visit the site is to check up on their friends. These kinds of social media can, therefore, be considered an extreme case of user-driven innovation. It is the users who provide the new content that constitute the core service. It is a user-created service.

Such user-created services on professionally provided platforms have existed in embryonic forms for many years in newspapers. It, however, gained momentum with the internet and, first and foremost, with the so-called web 2.0 applications since the turn of the millennium. Today, it is becoming an increasingly important form of content provision. Not only does it appear in pure content services. It also becomes part of larger service offerings as mentioned with Starbucks, where the Starbucks community becomes part of the overall service.

The means of communication used in such user generated content services can be multi-faceted. All kinds of text and voice, still and moving pictures, simultaneous and time-separated forms of communications will be used. There is no time-based cost constraints on the forms of communication made available. We are dealing with the time of the users themselves and not the time of the platform providers. There will, therefore, be time for a wide range of media applications allowing for rich communication experiences, which will also allow for many new forms of content, applications and services to be developed.

In addition to the media services mentioned here, other types of user generated services also deserve mentioning in this context. Open source software is an outstanding example. Users – at least a sub-group of users – will participate in building and upgrading the software. Another type of example is found in engineering consultancy services in the building area. In this area one will find a joint development of 2D and 3D drawings including the participation of the engineering consultants as well as their business customers (Falch and Nicolajsen, 2009). This type of interactive collaborative process has always taken place in engineering consulting. However, with the new electronic platforms for such cooperation, the customer encounter becomes ICT-based.

Summary

The paper puts focus on innovations from the service encounter – and more specifically the ICT-based service encounter. The paper begins by stating that there is a considerable amount of research done regarding the service encounter. Furthermore, the topic of service innovation has increasingly come to the fore in the past decade. In order to study innovations from the service encounter, it is an obvious approach to combine the two previous research areas. This is the aim of the paper with a special emphasis on the ICT-based service encounter.

The aim is thus to test the service encounter approach with respect to how much it potentially can contribute to an understanding of innovations emanating from the meeting between employees and customers in services involving ICT-based interaction. The overall claim is that service research has much to contribute. The implementation of ICT in services contributes greatly to the innovation of services, but in order to better understand innovations in ICT-based employee/customer interaction, a 'service approach' is one of the important ways to move forward.

With the purpose of specifying the term 'ICT-based service encounter', the paper differentiates between three such encounters: 1) Face-to-face service encounter with ICT-based customer/employee interaction, 2) ICT-based service encounter with ICT-based customer/employee interaction, and 3) ICT-based service encounter where the customers are part in creating the service itself.

In the first type of encounter, a 'service approach' clearly has much to say. It is a traditional face-to-face encounter supplemented with an ICT-based customer/employee interaction. The second type of encounter raises more complex issues. There are two sub-categories at stake. The first sub-category is concerned with e-commerce, where all retail or wholesale interactions are made via ICT, but where the product traded is a physical good and needs physical transportation and delivery mechanisms. The second sub-category concerns e-services, where the product traded is data, information or knowledge which can be transported on communication networks. Especially with respect to the second sub-category, where the core products partly have goods characteristics, the applicability of a traditional 'service logic' is an issue for further discussion.

The third type is a special case, but not more special than the fact that it will become increasingly widespread. Users are not only a source of inspiration for innovations; users themselves take part in the production and innovation processes. The service encounter approach certainly has much to contribute to the understanding of the innovation processes in these kinds of interactions between employees and users. However, it should also be noted that the growing amount of research in, for instance, social media and open source software takes many other avenues than the service encounter approach.

In conclusion, the service encounter approach offers a promising research avenue for understanding innovations from the ICT-based service encounter. However, it needs to be adapted to the ICT-based context and supplemented with additional approaches especially in the cases of ICT-based services where the users also are producers.

Readings

Alam, I. (2002). An Exploratory Investigation of User Involvement in New Service Development. *Journal of the Academy of Marketing Science*, 30(3), 250-261.

Bitner, M.J., Brown, S.W. & Meuter, M.L. (2000). Technology Infusion in Service Encounters. *Journal of the Academy of Marketing Sciences*, 28(1), 138-149.

Bogers, M., Afuah, A., Bastian, B. (2010). Users as innovators: A review, critique, and future research directions", *Journal of Management* 36 (4), 857-875.

Chesbrough, H.W. (2003). The Era of Open Innovation. *Sloan Management Review*, 44, 3 (Spring), 35-41

Dabholkar, P.A. (1996). Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality. *International Journal of Research in Marketing*, 13(1), 29-51.

Hofacker, C.F., Goldsmith, R.E., Bridges, E. and Swilley, E. (2007) E-Services: A synthesis and research agenda. *Journal of Value Chain Management*, 1(1/2), 13-44.

Kuusisto, A. & Riepula, M. (2008). Customer Interaction in Service Innovation: Seldom Intensive but often Decisive. Case Studies in Three Business Service Sectors, Radical Changes in Innovation Management. *Proceedings of the 9th International CINet Conference*. Valencia, Spain.

Sørensen, F., Mattson, J. & Sundbo, J. (2010a). Experimental Methods in Innovation Research. *Research Policy*, 39(3), 313-322.